

Abstract

An apparatus and methods for securely forwarding data packets at a data switching node in a data transport network is provided. The data switching node maintains a switching database of switching entries. Each switching entry has a modification protection feature preventing its modification when activated. Dynamic topology discovery of data network nodes can be disabled via topology discovery control flags associated with individual physical communications ports of the data switching node. Unknown destination flood data traffic is not replicated to physical communications ports having topology discovery disabled or specifying the suppression of replication of such unknown destination data traffic thereto. The advantages are derived from a data switching node being enabled to operate concurrently in friendly and hostile environments while detecting, preventing and reporting incidences of hostile MAC ADDR attacks.

09866359 052904